

FHWA	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD.	STPG-218-1(7)E	49	66

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMETRY

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	CY	205	TEST PIT EXCAVATION
1	CY	206	REMOVAL OF EXISTING SIDEWALK
60	SF	610	4 INCH CONCRETE SIDEWALK
1	EA	816	INSTALL CONTROLLER AND CABINET-BASE MOUNT
1	EA	811	FURNISH AND INSTALL ELECTRICAL HANDHOLE
1	CY	801	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
2	EA	SP	FURNISH AND INSTALL CONDUIT BEND IN EXISTING BASE
1	EA	805	FURNISH AND INSTALL 2" WEATHERHEAD
25	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-RISER
10	LF	805	FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
10	LF	805	FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
1	EA	807	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
1	EA	SP	AS-BUILT FOR TRAFFIC SIGNAL
2	EA	804	FURNISH AND INSTALL GROUND ROD-3/4 INCH DIAMETER X 10-FOOT LENGTH
20	LF	810	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
150	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-1 CONDUCTOR (NO. 4 AWG - THHN/THWN)
200	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO 14 AWG)
1	LS	SP	DELIVERY OF SALVAGED EQUIPMENT
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
1	LS	SP	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED

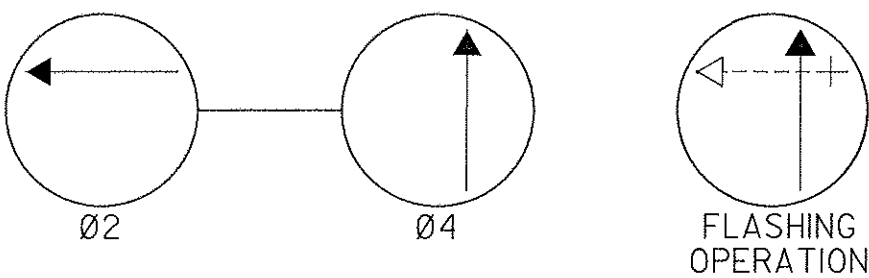
NOTE: ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
1	EA	CONTROLLER AND CABINET

PHASING DIAGRAM

	1	2	3	4
PHASE 2	G	G	R	R
2 CHANGE	Y	Y	R	R
PHASE 4	R	R	G	G
4 CHANGE	R	R	Y	Y
FLASHING OPERATION	FL R	FL R	FL Y	FL Y

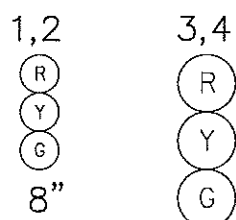
NEMA PHASING



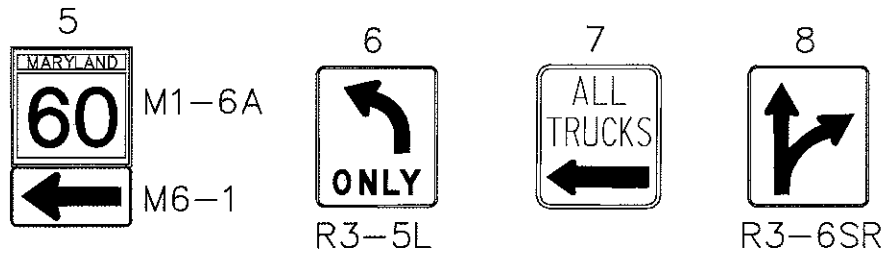
PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY

SIGNALS



SIGNS



NOTE: ALL SIGNALS AND SIGNS ARE EXISTING.

CONSTRUCTION DETAILS

- INSTALL BASE MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS AND 2-2" 90-DEGREE P.V.C. BENDS).
- INSTALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER WITH 2" WEATHERHEAD COIL 10' OF ADDITIONAL CABLE. INSTALL 2" WEATHERHEAD ON EXISTING MAST ARM POLE.
- INSTALL 2-2" P.V.C. BENDS IN EXISTING BASE.
- USE EXISTING SIGNAL HEAD.
- INSTALL HANDHOLE
- REMOVE AND REPLACE EXISTING SIDEWALK.
- REMOVE EXISTING CONTROLLER AND CABINET FROM TRAFFIC SIGNAL POLE AND INSTALL RUBBER PLUG.

UTILITY LEGEND

— G —	G	GAS MAIN
— W —	W	WATER MAIN
— S —	S	SEWER MAIN
— TV —	TV	STORM DRAIN
— E —	E	CABLE TELEVISION
— T —	T	ELECTRIC CABLES
— A —	A	TELEPHONE CABLES
—		AERIAL CABLES

INTERSECTION DESCRIPTION

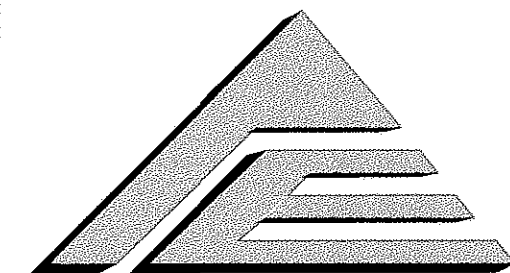
I. GENERAL

THIS INTERSECTION IS NORTH LOCUST STREET AND FAIRGROUND AVENUE. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE REPLACEMENT OF THE EXISTING TRAFFIC SIGNAL CONTROLLER AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT FAIRGROUND AVENUE RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

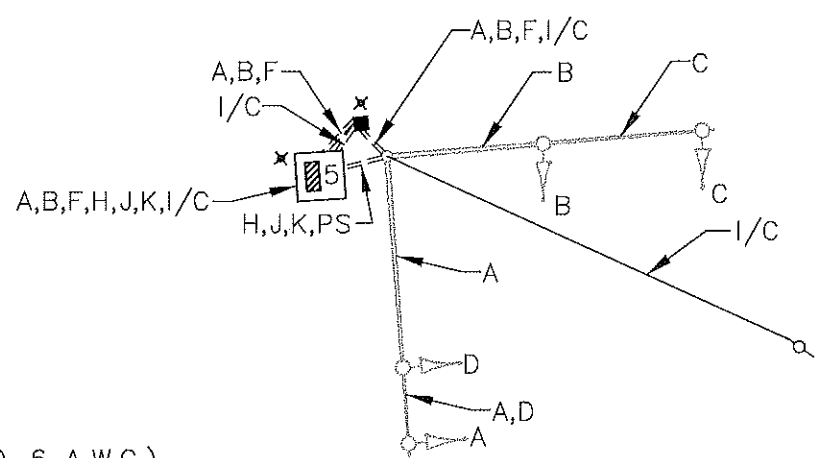
THE INTERSECTION WILL OPERATE IN A NEMA TWO (2) PHASE PRE-TIMED MODE. WESTBOUND FAIRGROUND AVENUE AND NORTHBOUND NORTH LOCUST STREET WILL OPERATE SEPARATELY.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE, HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.



A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 96-317

WIRING DIAGRAM



WIRING LEGEND

- A - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- B - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- C - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- D - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- F - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- H - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- J - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- K - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
- X - 3/4"x10' GROUND ROD
- PS - PROPOSED ELECTRICAL SERVICE
- I/C - INTERCONNECT CABLE

REVISIONS	APPROVALS
	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MI. 21MLOC01,24

DRAWN BY: T. COURVILLE
DES. BY: J. LAWRENCE
CHK. BY:

DATE: 05/30/97
SCALE: 1" = 10'

F.A.P. NO. STPG-218-1(7)E
S.H.A. NO. WA9535185
CITY NO. 07-243-332

TS. NO. 3714

SHEET NO. 49 OF 66

CITY OF HAGERSTOWN, MARYLAND
ENGINEERING DEPARTMENT

LOCATION: North Locust St. at
Fairground Ave.

TITLE: TRAFFIC SIGNAL UPGRADE

DRAWN BY	A.W. (BASE PLAN)	DATE	8-96
SURVEY BY	A.J.B.	DATE	7-96
SCALES	HORIZONTAL: 1" = 10'	VERTICAL:	-
APPROVED	FILE NUMBER		
DATE	67-054-14		
BY	CITY ENGINEER		